

through frequency assignment and coordination practice established by NTIA and the Interdepartment Radio Advisory Committee (IRAC). In order to facilitate such frequency assignment and coordination, applicants shall provide the Commission with sufficient information to evaluate electromagnetic compatibility with the federal government users of the spectrum, and any additional information requested by the Commission. As part of the coordination process, applicants shall show that they will not cause interference to authorized federal government users, based upon existing system information provided by the government. The frequency assignment and coordination of the satellite system shall be completed prior to grant of construction authorization.

(2) *Coordination among inter-satellite service systems.* Applicants for authority to establish inter-satellite service are encouraged to coordinate their proposed frequency usage with existing permittees and licensees in the inter-satellite service whose facilities could be affected by the new proposal in terms of frequency interference or restricted system capacity. All affected applicants, permittees, and licensees, shall at the direction of the Commission, cooperate fully and make every reasonable effort to resolve technical problems and conflicts that may inhibit effective and efficient use of the radio spectrum; however, the permittee or licensee being coordinated with is not obligated to suggest changes or re-engineer an applicant's proposal in cases involving conflicts.

[59 FR 53331, Oct. 21, 1994, as amended at 65 FR 59144, Oct. 4, 2000]

§ 25.280 Inclined orbit operations.

(a) Satellite operators may commence operation in inclined orbit mode without obtaining prior Commission authorization provided that the Commission is notified by letter within 30 days after the last north-south station keeping maneuver. The notification shall include:

- (1) The operator's name;
- (2) The date of commencement of inclined orbit operation;
- (3) The initial inclination;

(4) The rate of change in inclination per year; and

(5) The expected end-of-life of the satellite accounting for inclined orbit operation, and the maneuvers specified under § 25.283 of the Commission's rules.

(b) Licensees operating in inclined-orbit are required to:

(1) Periodically correct the satellite attitude to achieve a stationary spacecraft antenna pattern on the surface of the Earth and centered on the satellite's designated service area;

(2) Control all electrical interference to adjacent satellites, as a result of operating in an inclined orbit, to levels not to exceed that which would be caused by the satellite operating without an inclined orbit;

(3) Not claim protection in excess of the protection that would be received by the satellite network operating without an inclined orbit; and

(4) Continue to maintain the space station at the authorized longitude orbital location in the geostationary satellite arc with the appropriate east-west station-keeping tolerance.

[69 FR 54587, Sept. 9, 2004]

§ 25.281 Automatic Transmitter Identification System (ATIS).

All satellite uplink transmissions carrying broadband video information shall be identified through the use of an automatic transmitter identification system as specified below.

(a) Effective March 1, 1991, all satellite video uplink facilities shall be equipped with an ATIS encoder meeting the specifications set forth in paragraph (d) of this section.

(b) All video uplink facilities utilizing a transmitter manufactured on or after March 1, 1991 shall be equipped with an ATIS encoder meeting the performance specifications set forth in paragraph (d) of this section and the encoder shall be integrated into the uplink transmitter chain in a method that cannot easily be defeated.

(c) The ATIS signal shall be a separate subcarrier which is automatically activated whenever any RF emissions occur. The ATIS information shall continuously repeat.

(d) The ATIS signal shall consist of the following:

(1) A subcarrier signal generated at a frequency of 7.1 MHz \pm 25 KHz and injected at a level no less than -26 dB (referenced to the unmodulated carrier). The subcarrier deviation shall not exceed 25 kHz peak deviation.

(2) The protocol shall be International Morse Code keyed by a 1200 Hz \pm 800 Hz tone representing a mark and a message rate of 15 to 25 words per minute. The tone shall frequency modulate the subcarrier signal.

(3) The ATIS signal as a minimum shall consist of the following:

(i) The FCC assigned earth station call sign;

(ii) A telephone number providing immediate access to personnel capable of resolving ongoing interference or coordination problems with the station;

(iii) A unique ten digit serial number of random number code programmed into the ATIS device in a permanent manner such that it cannot be readily changed by the operator on duty;

(iv) Additional information may be included within the ATIS data stream provided the total message length, including ATIS, does not exceed 30 seconds.

[55 FR 21551, May 25, 1990. Redesignated at 62 FR 5932, Feb. 10, 1997]

§ 25.282 Orbit raising maneuvers.

A space station authorized to operate in the geostationary satellite orbit under this part is also authorized to transmit in connection with short-term, transitory maneuvers directly related to post-launch, orbit-raising maneuvers, provided that the following conditions are met:

(a) Authority is limited to those tracking, telemetry, and control frequencies in which the space station is authorized to operate once it reaches its assigned geostationary orbital location;

(b) In the event that any unacceptable interference does occur, the space station licensee shall cease operations until the issue is rectified;

(c) The space station licensee is required to accept interference from any lawfully operating satellite network or radio communication system.

[69 FR 54587, Sept. 9, 2004]

§ 25.283 End-of-life disposal.

(a) *Geostationary orbit space stations.* Unless otherwise explicitly specified in an authorization, a space station authorized to operate in the geostationary satellite orbit under this part shall be relocated, at the end of its useful life, barring catastrophic failure of satellite components, to an orbit with a perigee with an altitude of no less than:

$$36,021 \text{ km} + (1000 \cdot C_R \cdot A/m)$$

where C_R is the solar pressure radiation coefficient of the spacecraft, and A/m is the Area to mass ratio, in square meters per kilogram, of the spacecraft.

(b) A space station authorized to operate in the geostationary satellite orbit under this part may operate using its authorized tracking, telemetry and control frequencies, and outside of its assigned orbital location, for the purpose of removing the satellite from the geostationary satellite orbit at the end of its useful life, provided that the conditions of paragraph (a) of this section are met, and on the condition that the space station's tracking, telemetry and control transmissions are planned so as to avoid electrical interference to other space stations, and coordinated with any potentially affected satellite networks.

(c) *All space stations.* Upon completion of any relocation authorized by paragraph (b) of this section, or any relocation at end-of-life specified in an authorization, or upon a spacecraft otherwise completing its authorized mission, a space station licensee shall ensure, unless prevented by technical failures beyond its control, that all stored energy sources on board the satellite are discharged, by venting excess propellant, discharging batteries, relieving pressure vessels, and other appropriate measures.

(d) The minimum perigee requirement of paragraph (a) of this section shall not apply to space stations launched prior to March 18, 2002.

[69 FR 54588, Sept. 9, 2004]